

LADIES' ORCHESTRAS.

AMONG occupations suitable for women the playing of instruments in orchestral companies seems to offer unusual advantages. The demand for good music is perpetual, and skillful players are always required. In this country the large summer hotels pay from ten thousand to thirty thousand dollars per season for an orchestra; and in most cases the music might readily be furnished by women.

The same in respect to theaters and concerts. Good orchestras with women as the players doubtless could always find remunerative employment. The most recent effort in this direction is that of a titled lady in England. We copy the accompanying engraving and remarks from the *London Graphic*.

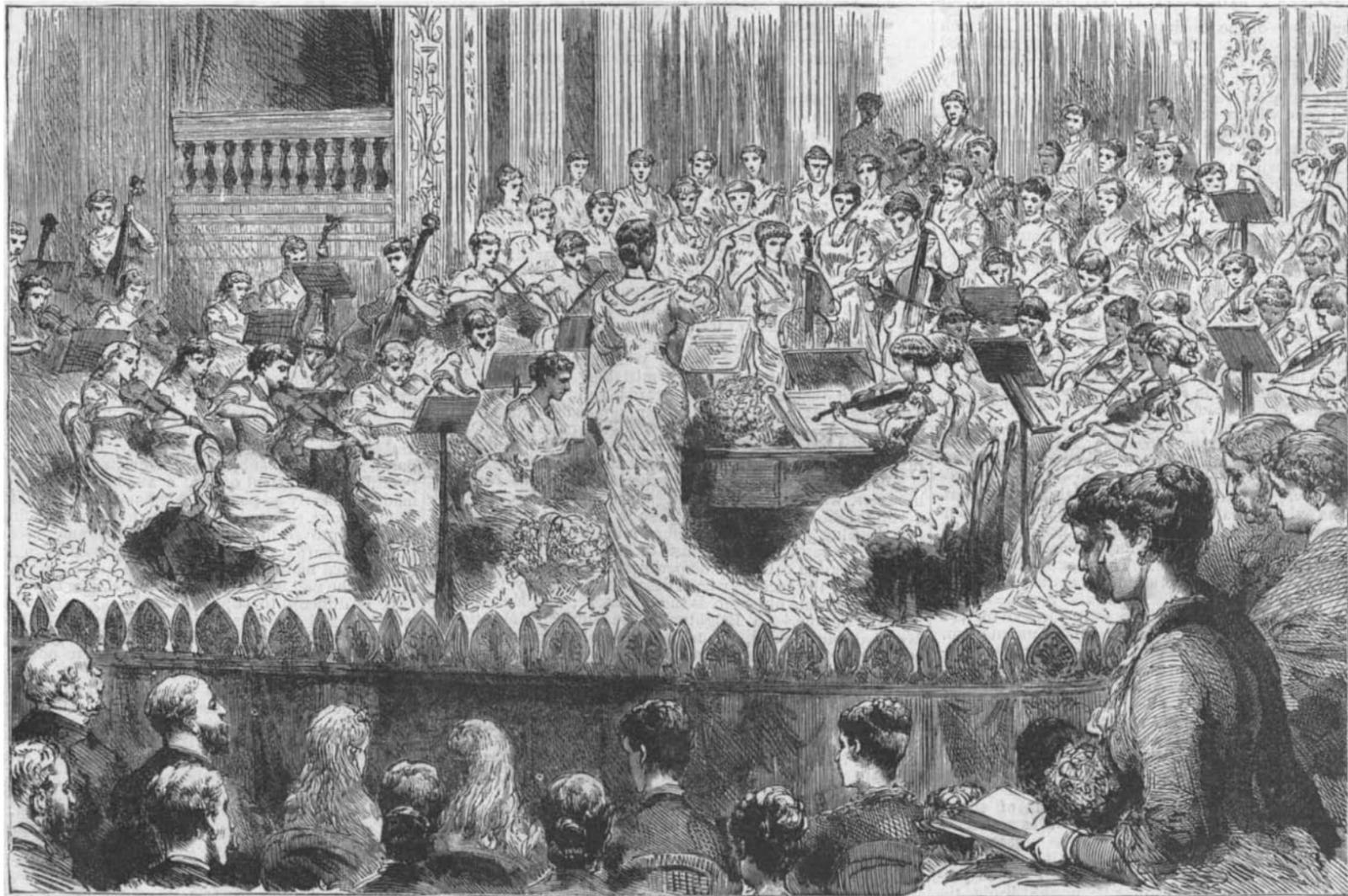
Although an orchestra of ladies is not altogether a novelty, and a lady conductor appeared as long ago as the time of Samuel Pepys, the circumstances under which the Viscountess Folkestone gave two concerts at Prince's Hall last

VIRCHOW ON DARWINISM.

THE attitude of Professor Rudolph Virchow, the eminent pathologist, toward Darwinism has been frequently misrepresented; and he has been held up and oft quoted as violently hostile to the theories of the dead scientist. It is therefore a matter of interest to hear what the great man himself has to say on the subject, the following being his speech delivered at a students' reception during the recent Tercentenary of the Edinburgh University.

"I never was hostile to Darwin, and never have said that Darwinism was a scientific impossibility. But at that time, when I pronounced my opinion on Darwinism at the Association of German Naturalists, at Munich, I was convinced, and still am, that the development which it had taken in Germany was extreme and arbitrary. Allow me to state to you the reasons on which I founded my opinion. First, Darwinism was interpreted in Germany as including the question of the first origin in life, not merely its manner of pro-

duced from similar ancestors. No man would now be justified in practical life in acting on the possibility of a generatio equivoca of micro-organisms. A physician who finds himself in presence of infectious disease among his patients, or an agriculturist whose crops are blighted, or a man engaged in the production of alcohol or sugar by fermentation must set himself to discover what brings about the changes with which he has to deal; he must see that organisms are there which have been imported from without, and must then inquire from whence they have been derived. The physician who has to combat an epidemic dare not act as if the germ were spontaneously produced in any patient. Such is the difference between logical possibilities and the practical work of daily life. Every teacher of science must lead his students to suppose that each living being that he meets must have had a father and mother, or, at least, one or other of them; and every scientific conclusion maintains that one generation is legitimately descended from another precisely similar. That was one consideration that led me



OCCUPATION FOR WOMEN—LADIES' ORCHESTRA, PRINCE'S HALL, LONDON.

week were sufficiently new to warrant a brief description. Lady Folkestone organized her string orchestra and choir in 1882, when she gave a concert at Stafford House in aid of the Royal College of Music. The band, like the choir, formed exclusively from the gentler sex, numbers many ladies of the nobility, and it comprises fourteen first and thirteen second violins, eight violas, eight violoncellos, and even three lady-players of that cumbersome instrument, the double bass. These ladies, under the *bâton* of Lady Folkestone, played the march from Handel's "Occasional" overture, the "Lullaby" from Mr. F. H. Cowen's string suite, "In the Olden Time," and the so-called "Concerto Grosso," which is, however, an arrangement by Geminiani of the tenth of the twelve violin sonatas written by Corelli at Rome in 1700. The choir sang a chorus from Dr. Ferdinand Hiller's "Song of Victory," Mendelssohn's "Now May Again," and Mr. Henry Leslie's part song, "The Swallow."

It was a very pretty sight to see Lady Folkestone's executants, the instrumentalists dressed in white, with shoulder-knots of pink or blue, occupying the platform; while the choristers, also dressed in white, with breast-knots of pink, white, or dark red roses, were arranged in tiers of seats at the background. The display of diamonds almost equaled that at a Court concert. The first of Lady Folkestone's concerts was attended by the Prince and Princess of Wales and two of their daughters, and the Princess Louise, and at the conclusion of the performance the royal party shook hands with and warmly congratulated the fair conductor."

THE hay-fever season has begun, and the White Mountain region echoes with the sneezes of the victims of that malady. An annual meeting of the Hay Fever Association will be held soon in Bethlehem.

pagation. Whoever investigates the subject of development comes upon the question of creation of life. This was not a new question. It is the old generatio equivoca, or epigenesis. Does life arise from a peculiar arrangement of inorganic atoms under certain conditions? We can imagine oxygen, carbon, and nitrogen coming together to form albumen, and that out of the albumen there was produced a living cell. All this is possible; but the highest possibility is only a speculation, and cannot be admitted as the basis of a doctrine. In science it is not hypotheses that decide, but facts; we arrive at truth only by investigation and experiment. I need not say that this demand of science for proof, instead of speculation, was long ago made in England. Ever since the time of Bacon it has had a home among you. We may concede that generatio equivoca is a logical possibility. But it is important for you students always to bear in mind the great distinctions between the construction of logical possibilities and their application, in practical life. If you try to shape your conduct simply according to logical possibilities, you will often find yourself coming into violent conflict with the stern facts of existence. Let me give you an illustration. In recent times the fact of the presence of minute organisms giving rise to important processes has been recognized, not only in medicine, but in connection with agriculture and various industries. It was of the utmost importance to determine whether these organisms were originated *de novo* in the decomposing bodies, or were produced by similar pre-existing organisms, and introduced from without. A century ago it was possible to admit the spontaneous generation of micro-organisms. But here sits M. Pasteur, the man who has demonstrated, by means of direct experiment, that, in spite of all logical possibility, all known micro-organisms found in decaying matter are de-

to warn my fellow countrymen against developing a system out of logical possibilities.

At the very time when we were getting free from the chains of former dogma, we seemed to be in danger of forging new ones for ourselves. The second question concerning Darwinism had regard to the descent of man, whether from apes or other vertebrate animals. Was there anywhere a pro-anthropos? In regard to this question, I thought that the existence of such a precursor of a man was a logical possibility, perhaps a probability. Only I found, to begin with, that it was a purely speculative question; not one raised by any observed phenomenon. No pro-anthropos had ever been discovered; not even a fragment of him. I had myself long been specially occupied in making prehistoric investigation to get near the primitive man. When I began these studies, twenty years ago, there was a general disposition to arrive at this discovery. Everybody who found a skull in a cave, or a bone in the fissure of a rock, thought he had got a bit of him. I wish you specially to notice that the smaller the fragment or skull, the easier it was to make it out to be the skull of the pro-anthropos. It was never thought of where an entire skull was in hand. When the upper part of the cranium alone—the calvarium without the face and the base, as is the case of the Neanderthal skull—was discovered, it was easy, by changing its horizontal position, by elevating either the anterior or posterior part, to give the impression that it had belonged either to a being of a superior or of an inferior race. You can make the experiment with any calvaria. If you make a series of diagrams of skulls, placing them over each other, you may make them appear similar or dissimilar, according as you choose one or another fixed point for bringing them into relation. I should like to impress upon you that every dis-